

# Type Approval Certificate



This is to certify that the undernoted product(s) has/have been tested in accordance with the relevant requirements of the GL Type Approval System.

Certificate No. 78 716 - 79 HH  
Company Straub Werke AG  
Rohrverbindungen  
Straubstrasse 13  
7323 Wangs, SWITZERLAND

Product Description STRAUB PIPE COUPLINGS

Type • METAL-GRIP •; • METAL- GRIP.dot •  
• METAL-GRIP-FIRE-FENCE (FIRE RESISTANT TYPE) •

Environmental Category • None

Technical Data / Range of Application TECHNICAL DATA (see page 2)

#### RANGE OF APPLICATION

The above mentioned couplings may be used considering the GL Rules Part 1- Seagoing Ships, Chapter 2, Section 11.D.2.6 as follows:

Bilge and ballast lines, fuel and oil lines, seawater lines, fresh and seawater cooling lines, fire fighting and deckwash lines, cargo oil lines, vent pipes, fill and sounding pipes, drinking water lines, sanitary discharge lines, inert gas lines on free deck, discharge lines from inert gas washers and deck water seals.

#### LIMITATIONS

The pipe couplings may not be used in bilge lines inside ballast and fuel tanks, seawater and ballast lines including air and overflow pipes inside cargo holds and fuel tanks, fuel and oil lines including air and overflow pipes inside machinery spaces, cargo holds and ballast tanks, dry pipe water spraying systems.

Test Standard • IACS P2.11 (Nov. 2001)

Documents • Test Report Z1 080611e  
• Data sheets: D/115511A02/03 AT, D/115100F01/01AT

Remarks • Fire endurance test acc. to IACS Req. P2.11.5.5.6  
• ISO 19921 and 19922 : 2005 (E)

Valid until 2012-01-28

Page 1 of 2

Type Approval Symbol



File No. II.C.06

Hamburg, 2008-06-25

Germanischer Lloyd

*Hanspeter Raschle*  
Hanspeter Raschle  
*Peter Gierhan*  
Peter Gierhan

This certificate is issued on the basis of "Guidelines for the Performance of Type Approvals Part 1, Procedure".

# Type Approval Certificate



This is to certify that the undernoted product(s) has/have been tested in accordance with the relevant requirements of the GL Type Approval System.

Certificate No. 78 716 - 79 HH

## TECHNICAL DATA

Type: METAL-GRIP {Material combination W1, W2 or W4}  
 Size Range: 30.0 [mm] to 406.4 [mm] pipe O.D.  
 Nominal Pressure: 8.0 [bar] to 16 [bar] {depending on size}

Type: Metal-GRIP.dot {Material combination W1, W2, or W4}  
 Size: 30.0 [mm] to 406.4 [mm] pipe O.D.  
 M.A.W.P.: 8.0 [bar] to 16 [bar] {depending on size}

Type: Metal-GRIP-FIRE-FENCE {Material combination W1, W2, W4 or W5}  
 Size: 30.0 [mm] to 406.4 [mm] pipe O.D.  
 M.A.W.P.: 8.0 [bar] to 16 [bar] {depending on size}

Temp. Range: -20 [°C] to 80 [°C]  
 Sleeve Material: NBR and EPDM

## MATERIALS

Material Combination	W1		W2		W4		AISI
	DIN	AISI	DIN	AISI	DIN	AISI	
Casing	1.0570 hot dip galv.	1024 hot dip galv.	1.4571	316Ti	1.4571		316Ti
Screws	1.7220	4135	1.7220	4135	1.4404 / 1.4435		316L
Bolts	1.0737 galv.	12L14 galv.	1.0737 galv.	12L14 galv.	1.4404 / 1.4435		316L
Strip insert (option)	1.4435	316L	1.4435	316L	1.4435		316L

Material Combination	W5	
	DIN	AISI
Casing	1.4571	316Ti
Screws	1.4404 / 1.4435	316L
Bolts	1.4404 / 1.4435	316L
Strip Insert (option)	1.4435	316L

- The selection of the pipe couplings for the corresponding application and the right installation are to be in accordance with the instructions of the manufacturer.

Valid until 2012-01-28

Page 2 of 2

Type Approval Symbol



File No. II.C.06

Hamburg, 2008-06-25

**Germanischer Lloyd**

*Hanspeter Raschle*  
 Hanspeter Raschle

*Peter Gierhan*  
 Peter Gierhan

This certificate is issued on the basis of "Guidelines for the Performance of Type Approvals Part 1, Procedure".